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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,248	12/09/2003	Junji Sakata	Q78868	3363

23373 7590 05/11/2006

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EXAMINER
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GLEITZ, RYAN M

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/730,248

Applicant(s)

SAKATA ET AL.

Examiner

Ryan Gleitz

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2006 and 16 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 12-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 8, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Mimura et al. (US 6,360,069).

Mimura et al. disclose a developing roller including an elastic layer (12) on a shaft (11), and an outer layer (13). Fine particles are dispersed in the outer layer and provide a surface roughness. Col. 2, lines 50-60. The fine particles can be made of various nylons, urethanes or acrylics, for example see mixtures 1 through 21, see the tables in columns 14-20, which reads on at least one of silicone rubber, urethane elastomer, or urethane acrylate.

For example, in mixture 5 the average particle diameter is 7 microns, which reads on the claimed range of 1 to 50 microns. Col. 15, line 65.

Regarding claim 17, mixture 5 also includes 20 parts urethane fine particles to 100 parts of the resin. Col. 15, line 64.

Regarding claim 18, the thickness of the outer layer is 25 microns. Col. 16, line 8.

Regarding claim 19, the ratio a/b would be 7/25 or 0.28, which reads on the claimed range.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 9, 12, and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US 6,360,069) in view of Takagi et al. (US 6,067,434).

Mimura et al. disclose the developing roller above, which can be formed from molding col. 13, lines 30-40, but does not disclose a conductive agent.

However, Takagi et al. disclose a conductive material in a developing roller outer layer as a friction controlling agent in an amount of 10 to 75 parts by weight on the basis of 100 parts by weight of the resin. See col. 7, lines 60-65.

Regarding claim 9, the conductive agent may be conductive carbon material such as Ketchen Black EC or acetylene black; a rubber carbon material such as SAF, ISAF, HAF, FEF, GPF, SRF, FT, and MT; carbon for color (ink) subjected to oxidation or the like; pyrolytic carbon; natural graphite; synthetic graphite, which read on a glassy carbon fine particle. See col. 5, line 55-60.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the developing roller of Mimura et al. with the conductive agent taught by Takagi et al. to reduce friction between the developing roller and the photoconductive drum. See col. 7, lines 60-65.

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Claims 6 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US 6,360,069) in view of Achiha et al. (JP 2002-310136).

Mimura et al. discloses the developing roller above including ultraviolet cured resin in the elastic layer, col. 13, line 25-30, but do not disclose that the outer layer can also be formed of ultraviolet-curable resin.

However, Achiha et al. discloses a similar developing roller including an outer layer formed by an ultraviolet curing type resin. See abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the outer layer of Mimura et al. to be made of ultraviolet curable resin so that a long drying time will not be needed. See Achiha et al., abstract. Further motivation is provided by teaching in Mimura et al. that added an ultraviolet ray absorbing agent will improve workability and cost. See col. 13, lines 25-30.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3-9, and 12-19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

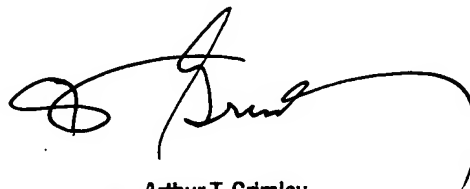
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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